
International Smoking Statistics

Web Edition

A collection of worldwide historical data

Supplement 1

Estimation of sex-specific smoking statistics by standardized age groups and time periods

Update Notes

Barbara Forey, Jan Hamling,
John Hamling, Alison Thornton, Peter Lee

P N Lee Statistics & Computing Ltd
17 Cedar Road
Sutton SM2 5DA, UK
www.pnlee.co.uk

This report updates Supplement 1 of International Smoking Statistics 2nd edition,
Wolfson Institute of Preventive Medicine and OUP, 2002, www.oup.co.uk/isbn/0-19-850856-5

Date of issue: 24-Oct-2011

(Last major revision 25-Oct-2007)

© Barbara Forey, Jan Hamling, John Hamling, Alison Thornton, Peter Lee, 2007-2011

This work is copyright. It may be reproduced or quoted in whole or in part for study or research purposes, subject to inclusion of an acknowledgement of the source. It may not be reproduced for purposes other than those above or sold without written permission from the authors.

Issue History:

First issued 25-Oct-2007

Revised 19-Dec-2007 – updated for Austria, Switzerland; minor correction to Canada (prevalence, females)

Revised 17-Sep-2008 – updated for Denmark.

Revised 12-Jan-2009 – updated for Germany, minor formatting corrections for Denmark.

Revised 26-Feb-2009 – updated for New Zealand.

Revised 17-Mar-2009 – corrections to New Zealand.

Revised 24-Jul-2009 – updated for Sweden.

Revised 17-Sep-2009 – updated for France.

Revised 27-Jan-2011 – updated for Italy.

Revised 4-Jul-2011 – updated for Finland, minor change to text section *Differences from previous results*.

Revised 24-Oct-2011 – updated for Spain. Correction to text section *Methods* and new subsection *Methods for period averages*. Minor corrections to product and frequency codes in individual survey prevalence tables for Austria and Denmark (see respective country *Issue Histories* for details). Corrections to cigarettes per person tables (both individual surveys and period averages) for Finland, France, East Germany, and New Zealand; correction occurs for surveys shown in Table 7 of the country chapter with an age group marked * indicating missing data, where sales adjustment had not been correctly applied in the Supplement tables.

Contents

Contents	3
Preface	4
Downloads	4
Acknowledgements	5
Text.....	6
Background.....	6
Scope of the current tables.....	6
Methods	7
Differences from previous results	8
Table S1.1 See IntSS2-Suppl1, p.28	
Table S1.2 Males – allocation of countries and decades to “solely cigarettes” (SC) or “multiple products” (MP)	9
Table S1.3 Males – allocation of products and decades to weighting sets for prevalence	10
Table S1.4 Females – allocation of countries and decades to weighting sets	10
Table S1.5 Values of weights - prevalence.....	11
Table S1.6 Values of weights – cigarettes per person.....	11
Table S1.7 Product groupings used when averaging individual surveys into period averages	12
Table S1.8 Estimated prevalence of smoking by standard age groups and 5-year periods. For updated countries, see ISS-Supplement-1.xls, otherwise see IntSS2- Suppl1, pp. 34-51	
Table S1.9 Estimated cigarettes per person by standard age groups and 5-year periods. For updated countries, see ISS-Supplement-1.xls, otherwise see IntSS2- Suppl1, pp. 52-61	
Figures S1.1-S1.3 See IntSS2-Suppl1, pp. 62-64	
Annex A Prevalence of smoking – individual surveys. For updated countries, see ISS- Supplement-1.xls, otherwise see IntSS2-Suppl1, pp. 65-167	
Annex B Cigarettes per person – individual surveys. For updated countries, see ISS- Supplement-1.xls, otherwise see IntSS2-Suppl1, pp. 168-201	
References	13

IntSS2-Suppl1, see References: Forey and Lee (2002)

Preface

International Smoking Statistics is a collection of smoking data covering most of Europe and various other economically developed countries. The second edition (published by Wolfson Institute of Preventive Medicine and OUP, 2002, www.oup.co.uk/isbn/0-19-850856-5) included data for 30 countries up to 1995. Since 2006, work has been ongoing to make individual country updates available online. Please register at www.pnlee.co.uk if you wish to be informed when updates are posted.

The methods used in the web edition are essentially unchanged from those of the second edition, although some minor changes are included in the online Methods chapter. Readers are strongly recommended to consult the Methods chapter.

The two main types of data presented are sales data and survey data. We give the results of the original authors as closely as possible, whilst presenting them in a uniform format.

Sales data give the total national consumption of tobacco. Data on sales of cigarettes and of all tobacco products are presented, usually from about 1920. Estimates of the consumption of hand-rolled cigarettes are included where possible, as are data on the types of manufactured cigarettes sold. The Tobacco Research Council provided most of the sales data until 1973, while later sales data were obtained from government and industry sources.

Survey data provide information on the prevalence and amount of smoking according to age and sex. These were obtained from a wide variety of surveys. Some survey data are available for the early part of the 20th century, but for most countries they are available only from the 1950s or 1960s onwards.

In additional tables we calculate further statistics by combining sales and survey data using certain standardized assumptions. The figures are intended to provide an easily interpretable summary of the data presented in the tables, and the commentary has deliberately been kept to a minimum.

Downloads

Updates currently available to download from www.pnlee.co.uk include:

Methods, including

Appendix I: *Estimated size of adult population;*

Appendix II: *Comparisons of manufactured and hand-rolled cigarettes and differences in the way they are smoked;*

Appendix III: *Consumption category estimation;*

Comparisons between countries;

Updated country chapters (see *Methods* for current list);

Tables from each updated chapter, in Excel format, including extended versions of Tables 4 and 6 and Figure 3 for chapters issued since January 2011;

Supplement 1: *Estimation of sex-specific smoking statistics by standardized age groups and time periods.* [The web edition comprises this Update Note,

together with tables (in Excel format only) for the countries with a chapter in the web edition. The original Supplement 1 to the second edition (an extended version of Appendix IV to the second edition) is also available and gives a full description and tables for the other countries].

Also available from the same source are:

Supplement 2 to the second edition: *Estimating past smoking habits by an indirect method. An investigation into a method based on recall, with application to Great Britain*. [This supplement is an extended version of Appendix V to the second edition];

IMASS, a comprehensive Excel database system, based on WHO mortality data and smoking statistics from Supplement 1. The IMASS system includes powerful routines for creating graphs and tables.

Acknowledgements

We would like to acknowledge the tobacco industry for their financial support and for providing some of the sales data in International Smoking Statistics.

We would also like to thank the many government and research organizations and individuals who supplied much of the information included.

We thank Yvonne Cooper, Pauline Wassell and Diana Morris for maintenance of our references database.

We are indebted to G. F. Todd, past director of the Tobacco Research Council, who, shortly before he died in 1988, had prepared a draft report from which the first edition of International Smoking Statistics developed.

Professor Nicholas Wald was an editor of earlier editions, and we thank him for his support and encouragement.

We alone bear the responsibility for the analysis and interpretation of the data presented.

Background

When attempting to relate differences in mortality trends in different countries to differences in national trends in the consumption of cigarettes and other tobacco products, it is important to use data that are specific for the two sexes. Trends in both mortality and smoking habit in many countries are very different for the two sexes. It is also important that age-specific data should be used. The diseases being studied are generally considered to have a long latency period and predominantly affect older age groups, whereas smoking is a habit generally established at younger ages but declining among older age groups. A birth cohort-based approach is necessary, since any analysis that fails to take age into account will be working with the smoking habits of a whole range of successive generations. Although data on sex- and age-specific mortality are available for many countries (World Health Organization, Alderson (1981)), data on smoking habits are not readily available in an equivalent form.

Some years ago, it was decided to undertake a major project to collate relevant data. This resulted in the publication of successive editions of International Smoking Statistics (Nicolaidis-Bouman *et al* (1993), Forey *et al* (2002)), referred to hereafter as IntSS (or IntSS1 and IntSS2 for the two editions). These provide data of two main types – national sales of cigarettes and other products (up to 1985 in the first edition and to 1995 in the second), and sex- and age-specific smoking habits – in as consistent a form as possible. However, the sex- and age-specific data were collected from a wide variety of sources and were virtually never found to be available in the format required. Definitions of smoking products, frequency of smoking, survey methods and age groups all varied between sources and between countries. As a second stage, estimation work was carried out to transform the data to age groups and time-periods equivalent to those available for mortality data, and to standardize the definitions of smoking products and other aspects of smoking habits. This work was reported in a Supplement to IntSS1, and as Supplement 1 to IntSS2 (Forey and Lee (2002)), hereafter referred to as IntSS2-Suppl1.

IntSS2-Suppl1 included a detailed description of the method used to transform the data presented in the main book into a standardized form, as well as tables presenting the results for the 30 countries.

Scope of the current tables

As new chapters are issued in the web edition of the IntSS (referred to as IntSS3), new versions of the standardized tables will also be issued. Thus the tables will be extended to cover more recent years, and to incorporate any changes or additions to earlier data. The methods used are essentially unchanged and were fully described in IntSS2-Suppl1, subject to some minor revisions described below (p. 7).

The countries for which revised tables of results are currently available are shown in the *Methods* chapter of IntSS3, under *Countries considered*, p. 6. Tables for West and East Germany are included up to 1990, and for unified Germany from 1991.

The standardization is carried out in two phases. Firstly, data from each original survey are transformed to correspond to a set of standard age groups. These survey-specific estimates, originally presented in Annexes A and B of IntSS2-Suppl1, are now made available in Excel format, in ISS-Supplement-1.xls, available from www.pnlee.co.uk. Secondly, the individual surveys are combined into period averages. These were presented in Tables S1.8 and S1.9 of IntSS2-Suppl1, and now are available in ISS-Supplement-1.xls.

Methods

The methods have been fully described in IntSS2-Suppl1, and will not be repeated here. Briefly, based on the surveys in IntSS2, various sets of weights were established, corresponding to each of a set of standard age groups. An appropriate set of weights was allocated to each set of survey data, depending on country, year, sex, product and data type (prevalence or cigarettes per person). These weights were then used to split up data from wider non-standard age bands, and, in certain circumstances, to extrapolate the data to cover the whole adult age range (15+). Next, data from different surveys were averaged together to give estimates by country, sex, age and 5-year period, with the grouping of data by tobacco product depending on country and period, and finally, intermediate periods with no data were filled by interpolation within age group. The following points can be mentioned:

Estimation of weights. The weights have not been re-estimated. They are therefore based on those surveys that were included in IntSS2. For convenience, Tables S1.5 and S1.6 showing the weights are repeated here.

Population. For clarification, the European standard population was used for all countries while estimating the weights, but the country- and year- specific population was used when applying the weights to the individual surveys, including both the “interpolation” and “extrapolation” parts of the method.

Allocation of weighting sets. The same weights as used for the early 1990s have usually now been applied to the late 1990s and 2000s, as shown in extended versions of Tables S1.2 – S1.4. In a few instances, an allocation has been added for a country/decade where there was previously no data.

Surveys included. Previously in IntSS2-Suppl1, all data from Tables 4, 6, and 7 of each chapter of IntSS2 were included, but in the new tables, certain results which represent duplicate information have been omitted. For instance, if a survey originally presented results according to two different age groupings, or using two different population-weighting schemes, both sets of results may have been displayed in the chapter, but one only is now selected for inclusion in the standardization work. These are usually indicated by * in the *Source* column. In addition, for the USA, results coded as product A* (indicating “smoking or use of smokeless tobacco”), have been omitted.

Layout of survey-specific results. The layout is as described previously (IntSS2-Suppl1, section 3.7.2, p. 20), except that the guesstimate region is now indicated by yellow background colour, while the extrapolated region is now indicated by green background colour. In addition, the weighting sets used are shown at the top of each sheet.

Allocation of product groupings. As explained previously (IntSS2-Suppl1, section 4.1, p. 23), a product grouping is defined to reflect known usage of

products in different countries or at different times. The same product groupings as used in the early 1900s have usually also been applied to the late 1990s and 2000s, as shown in the extended version of Table S1.7.

Methods for period averages. As explained previously (IntSS2-Suppl1, section 4.1, p. 23), the average was calculated for each age group from all the individual surveys within each 5-year period; for clarification, surveys which, after the extrapolation stage, did not cover all of the 15-19 ages were omitted from the averages for those ages. Also as explained previously (IntSS2-Suppl1, section 4.1, p. 24), period gaps were filled by interpolation, subject to a maximum of 3 periods.

Layout of period average tables. In the Excel version of the period average tables, the product grouping code is shown. Where the product grouping indicates that estimates for more than one product are averaged together and interpreted as equally applicable to each, then the estimates are repeated. In the previous version of the tables (Tables S1.8 and S1.9 of IntSS2-Suppl1), the estimates were shown once only, labelled according to all the products for which the estimate is applicable. For example, for USA up to 1970, product grouping 2a was used, so there are two separate sets of estimates – in Tables S1.8 and S1.9, these were labelled “TC+MC” and “A” respectively, whereas in the Excel table, the first set of estimates are shown under “Manufactured cigarettes” and are repeated under “Total cigarettes”, whereas the second set are shown under “All tobacco products”. After 1970, product grouping 1 is used, so there is only one set of estimates – in Tables S1.8 and S1.9, these were labelled “A+TC+MC”, while in the Excel table, they are repeated in each section.

Differences from previous results

For estimates up to 1995, there may be differences between the current results and the earlier versions in IntSS2-Suppl1 for various reasons:

- we may have included additional surveys in IntSS3;
- we may have omitted IntSS2 data from IntSS3 if subsequently identified as duplicates or superseded by better quality data;
- data may have been revised in the light of further information coming to our attention (for instance the age range or product definition of an older survey may have been altered);
- we may have revised the “assumed extensions to the age distribution” (described in the *Methods* chapter under *Additional derived data*) so that they align better with new information;
- estimates before 1950 may have been affected by the revision to our method for estimating the sex- and age- specific population, as described in the *Methods* chapter, *Appendix 1*, p. 27;
- values ending “.5” may have been rounded differently due to use of different software;
- as mentioned above under *Surveys included*, certain duplicate items are now omitted.

Table S1.1 See IntSS2-Suppl1, p.28

Table S1.2 Males – allocation of countries and decades to “solely cigarettes” (SC) or “multiple products” (MP)

Country	Decade						
	pre-1950	1950s	1960s	1970s	1980s	1990s	2000s
Australia	MP	MP	MP	MP	SC	SC	SC
Austria		MP		SC	SC	SC	SC
Belgium		MP	MP	MP	MP	MP	
Bulgaria					SC	SC	
Canada		SC	SC	SC	SC	SC	SC
Czechoslovakia Combined				SC	SC	SC	
Czech Republic			SC	SC	SC	SC	
Slovakia				SC	SC	SC	
Denmark		MP	MP	MP	MP	MP	MP
Finland		SC	SC	SC	SC	SC	SC
France		MP	MP	MP	MP	MP	MP
Germany West		MP	MP	MP	MP	SC	
East			MP	MP	MP	SC	
Unified						SC	MP
Greece		SC	SC	SC	SC	SC	
Hungary			SC	SC	SC	SC	
Iceland			MP	MP	SC	SC	
Ireland		MP	MP	MP	MP	MP	
Israel			SC	SC	SC	SC	
Italy	MP	MP	SC	SC	SC	SC	SC
Japan		SC	SC	SC	SC	SC	SC
Netherlands	MP	MP	MP	MP	MP	MP	
New Zealand			MP	SC	SC	SC	SC
Norway		MP	MP	MP	SC	SC	
Poland		SC	SC	SC	SC	SC	
Portugal				SC	SC	SC	
Romania			SC	SC	SC	SC	
Spain			MP	SC	SC	SC	SC
Sweden	MP		MP	MP	SC	SC	SC
Switzerland		MP	MP	MP	MP	MP	MP
UK	MP	MP	MP	MP	MP	MP	MP
USA	MP	MP	MP	SC	SC	SC	SC
USSR				SC	SC	SC	
Russia					SC	SC	
Estonia					SC	SC	
Latvia						SC	
Lithuania				SC	SC	SC	
Ukraine, Belorussia, Moldova					SC	SC	
Armenia, Azerbaijan, Georgia			SC			SC	
Central Asia				SC	SC	SC	
Multiple/unspec		SC		SC	SC		
Yugoslavia		SC	SC	SC	SC	SC	

Entries in bold indicate that there were survey(s) from the country/decade included in the process of estimating weights. Entries in normal type style indicate that there were survey(s) but that they did not qualify for inclusion in that process.

Table S1.3 Males – allocation of products and decades to weighting sets for prevalence

Product ¹	Decade						
	pre-1950	1950s	1960s	1970s	1980s	1990s	2000s
SC		m-flat	m-flat	m-young	m-young	m-mid	m-mid
C in MP	m-mid	m-young	m-young	m-young	m-young	m-young	m-young
A in MP	m-flat	m-flat	m-flat	m-flat	m-flat	m-young	m-young

1 For meanings of codes, see p. 16 of IntSS2-Suppl1 (Forey and Lee (2002))

Table S1.4 Females – allocation of countries and decades to weighting sets

Country	Decade						
	pre-1950	1950s	1960s	1970s	1980s	1990s	2000s
Australia	f-mid	f-mid	f-flat	f-flat	f-young	f-young	f-young
Austria		f-young		f-young	f-young	f-young	f-young
Belgium		f-mid	f-flat	f-young	f-young	f-young	
Bulgaria					f-young	f-young	
Canada		f-flat	f-flat	f-flat	f-flat	f-flat	f-flat
Czechoslovakia Combined				f-young	f-mid	f-flat	
Czech Republic			f-young	f-young	f-mid	f-flat	
Slovakia				f-young	f-mid	f-mid	
Denmark		f-young	f-flat	f-flat	f-flat	f-flat	f-flat
Finland		f-young	f-young	f-young	f-young	f-young	f-young
France		f-young	f-young	f-young	f-young	f-young	f-young
Germany West		f-young	f-young	f-young	f-young	f-mid	
East			f-mid	f-flat	f-young	f-young	
Unified						f-mid	f-mid
Greece		f-mid	f-mid	f-mid	f-flat	f-flat	
Hungary			f-young	f-mid	f-mid	f-flat	
Iceland			f-flat	f-flat	f-flat	f-flat	
Ireland		f-flat	f-flat	f-flat	f-flat	f-flat	
Israel			f-flat	f-flat	f-flat	f-flat	
Italy	f-flat	f-flat	f-flat	f-young	f-young	f-mid	f-mid
Japan		f-old	f-old	f-old	f-flat	f-young	f-young
Netherlands	f-young	f-young	f-young	f-young	f-flat	f-flat	
New Zealand			f-flat	f-flat	f-young	f-young	f-young
Norway		f-young	f-young	f-young	f-flat	f-flat	
Poland		f-young	f-young	f-young	f-mid	f-mid	
Portugal				f-young	f-young	f-young	
Romania			f-flat	f-old	f-flat	f-flat	
Spain			f-young	f-young	f-young	f-young	f-young
Sweden	f-young		f-young	f-young	f-flat	f-flat	f-flat
Switzerland		f-young		f-young	f-young	f-flat	f-flat
UK	f-flat	f-flat	f-flat	f-flat	f-flat	f-flat	f-flat
USA	f-mid	f-mid	f-mid	f-flat	f-flat	f-flat	f-flat
USSR				f-flat	f-young	f-young	
Russia					f-mid	f-mid	
Estonia						f-mid	
Latvia						f-mid	
Lithuania				f-flat	f-young	f-young	
Ukraine, Belorussia, Moldova					f-young	f-young	
Armenia, Azerbaijan, Georgia			f-flat			f-young	
Central Asia				f-flat	f-young	f-young	
Multiple/unspecified		f-flat		f-flat	f-young		
Yugoslavia		f-mid	f-old	f-mid	f-mid	f-mid	

Entries in bold indicate that there were survey(s) from the country/decade included in the process of estimating weights. Entries in normal type style indicate that there were survey(s) but that they did not qualify for inclusion in that process.

Table S1.5 Values of weights - prevalence

Age group	Age	Male			Female			
		m-flat	m-young	m-mid	f-flat	f-young	f-mid	f-old
1	12	16	15	21	25	22	15	16
2	13	31	30	41	51	44	30	32
3	14	37	35	45	55	53	34	32
4	15	46	45	51	60	68	40	32
5	16	58	56	58	67	87	48	32
6	17	71	69	66	75	108	57	32
7	18	85	82	74	84	130	66	32
8	19	95	91	92	107	143	79	47
9	20	105	101	103	112	171	105	62
10	21-24	102	117	117	121	168	135	77
11	25-29	104	121	121	121	150	146	81
12	30-34	106	118	124	122	140	153	86
13	35-39	108	114	121	117	125	145	97
14	40-49	109	110	117	116	106	136	102
15	45-49	108	108	111	109	93	110	116
16	50-54	107	102	103	104	76	92	124
17	55-59	104	98	93	91	65	70	130
18	60-64	101	90	81	83	51	55	128
19	65-69	94	81	74	67	41	42	125
20	70-74	85	70	63	60	31	28	125
21	75-79	77	62	53	46	23	19	125
22	80-84	75	53	43	44	20	13	125
23	85-89	75	46	37	28	20	13	125

Table S1.6 Values of weights – cigarettes per person

Age group	Age	Male			Female			
		m-main	m-Denmark (1950s)	m-Greece (1950s)	f-flat	f-young	f-mid	f-old
1	12	5	17	12	4	4	2	2
2	13	9	35	24	10	9	5	5
3	14	17	65	45	26	25	14	13
4	15	23	87	60	39	38	21	20
5	16	39	87	60	50	62	37	20
6	17	57	87	60	70	96	64	20
7	18	75	87	60	81	120	86	20
8	19	82	108	69	103	141	101	37
9	20	95	129	79	104	151	105	55
10	21-24	112	150	88	120	158	123	72
11	25-29	117	153	91	123	150	136	77
12	30-34	124	155	93	126	143	153	83
13	35-39	123	146	100	126	131	148	97
14	40-49	123	135	106	124	118	142	105
15	45-49	118	107	115	121	104	117	126
16	50-54	111	90	120	112	84	96	140
17	55-59	100	57	122	96	69	69	142
18	60-64	86	39	119	75	47	54	129
19	65-69	74	15	112	56	39	40	115
20	70-74	59	10	107	40	29	27	115
21	75-79	44	3	90	28	23	17	115
22	80-84	31	3	70	19	12	12	115
23	85-89	25	3	47	15	3	12	116

Tables S1.5 and S1.6 are unchanged from IntSS2-Suppl1, and are repeated here for convenience.

Table S1.7 Product groupings¹ used when averaging individual surveys into period averages

Country	Decade						
	pre-1950	1950s	1960s	1970s	1980s	1990s	2000s
Australia	3	3	3	3	2b	2b	2b
Austria		2a		1	1	1	1
Belgium		3	3	3	3	3	
Bulgaria					1	1	
Canada		3	3	3	2b	2b	2b
Czechoslovakia combined				1	1	1	
Czech Republic			1	1	1	1	
Slovakia				1	1	1	
Denmark		3	3	3	3	3	3
Finland		2a	2a	2a	2a	2a	2a
France		3	3	3	3	3	3
Germany West		3	3	3	3		
East			3	3	3		
Unified						2b	3
Greece		1	1	1	1	1	
Hungary			1	1	1	1	
Iceland			2a	2a	1	1	
Ireland		2a	2a	2a	2a	2a	
Israel			1	1	1	1	
Italy	2a	2a	1	1	1	1	1
Japan		1	1	1	1	1	1
Netherlands	3	3	3	3	3	3	
New Zealand			2b	2b	2b	2b	2b
Norway		3	3	3	2b	2b	
Poland		1	1	1	1	1	
Portugal				1	1	1	
Romania			1	1	1	1	
Spain			1	1	1	1	1
Sweden	2a		2a	2a	1	1	1
Switzerland		2a		2a	2a	2a	2a
UK	3	3	3	3	3	3	3
USA	2a	2a	2a	1	1	1	1
USSR				1	1	1	
Russia					1	1	
Estonia						1	
Latvia						1	
Lithuania				1	1	1	
Ukraine, Belorussia, Moldova					1	1	
Armenia, Azerbaijan, Georgia			1			1	
Central Asia				1	1	1	
Multiple/unspec		1		1	1		
Yugoslavia		1	1	1	1	1	

1 For meanings of codes, see p.23 of IntSS2-Suppl1(Forey and Lee (2002))

Table S1.8 Estimated prevalence of smoking by standard age groups and 5-year periods. For updated countries, see ISS-Supplement-1.xls, otherwise see IntSS2-Suppl1, pp. 34-51

Table S1.9 Estimated cigarettes per person by standard age groups and 5-year periods. For updated countries, see ISS-Supplement-1.xls, otherwise see IntSS2-Suppl1, pp. 52-61

Figures S1.1-S1.3 See IntSS2-Suppl1, pp. 62-64

Annex A Prevalence of smoking – individual surveys. For updated countries, see ISS-Supplement-1.xls, otherwise see IntSS2-Suppl1, pp. 65-167

Annex B Cigarettes per person – individual surveys. For updated countries, see ISS-Supplement-1.xls, otherwise see IntSS2-Suppl1, pp. 168-201

References

Alderson M. (1981). *International Mortality Statistics*. The Macmillan Press, London.

Forey B., Hamling J., Lee P. and Wald N. (eds) (2002). *International Smoking Statistics. A collection of historical data from 30 economically developed countries*, 2nd edition. Wolfson Institute of Preventive Medicine and Oxford University Press, London and Oxford. Errata available at www.pnlee.co.uk/ISS2.htm.

Forey B. and Lee P. (2002). *Estimation of sex-specific smoking statistics by standardized age groups and time periods. Supplement 1 to International Smoking Statistics, a collection of historical data from 30 economically developed countries (2nd edition)*. P N Lee Statistics and Computing Ltd, Sutton, Surrey. www.pnlee.co.uk/reflist.htm [Download ISS2suppl1 FOREY2002C].

IntSS2-Suppl1 – see Forey and Lee (2002)

Nicolaides-Bouman A., Wald N., Forey B. and Lee P. (1993). *International smoking statistics. A collection of historical data from 22 economically developed countries*. Wolfson Institute of Preventive Medicine and Oxford University Press, London and Oxford.

World Health Organization *WHO Mortality Database*. <http://www3.who.int/whosis>.